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OSTEOCHONDRITIS DISSECANS (OCD) OF THE TALOCRURAL JOINT IN A MARE

(With 2 Fig.)

By

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(Received at 16/10/1993)

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تم الفحص الاكلينيكي الاولى لفرسة عمرها حوالى ثلاث سنوات بمستشفى الطب البيطرى جامعة اسيوط وكان بها ورم واضح بمفصل العرقوب تم تصوير شعاعى من جهات مختلفة للمفصل وكان التشخيص التهاب جزئى امامى علوى مزمن لمفصل العرقوب . وتم استخراج جزيئات العظم المنفصلة جراحيا من داخل المفصل وتم الشفاء بصورة مرضية .

SUMMARY

A 3-year-old mare was presented to the clinic with enlargement of the right hock joint. Clinical examination was performed and a survey radiograph was taken. The condition was diagnosed as osteochondritis dissecans of the talocrural joint. Surgical treatment was recommended for removal of the intra-articular bone fragments. Recovery was uneventful.

INTRODUCTION

Osteochondrosis (dyschondroplasia) results from a disturbance of cellular differentiation in the growing cartilage. There is a failure of endochondral ossification and persistence of hypertrophied cartilage. This failure leads to necrosis in the basal layers of the thickened retained cartilage (Stromberg and Rejno, 1976).

The cause of the disease in horse is considered to be multifactorial and not yet completely defined, including rapid growth rate, genitic predisposition, endocrine factors and nutritional imbalance (FISCHER, 1984; STASHAK, 1987 and WATKINS, 1992). Subsequent biomechanical stress give rise to fissures in this damaged cartilage. Progressive break down of cartilage can then lead to the syndromes designated as osteochondritis dissecans (STASHAK, 1987 and WATKINS, 1992).

Osteochondritis dissecans (OCD) has been most commonly observed in the femoropatellar and tarsocrural joints of horse (TROTTER and MCLWRITH, 1981).

The similar appearing conditions have been early reported in the hock joint as intracapsular bony fragments of the distal extremity of the tibia (BIRKLAND and HAAKENSTAD, 1968), and as osteochondral and intra-articular fractures (O'BRIEN, 1973 and SEHEBITZ *et al.*, 1975). The same conditions were later described as osteochondritis or osteochondrosis dissecans (DEMOORE *et al.*, 1972; ZELLER *et al.*, 1978; LINDSEL, *et al.*, 1983; HOPPE, 1984 and WATSON and SELCER, 1992).

History:

A 3-year-old mixed breed mare weighing approximately 400 kg was presented to the department of surgery, faculty of veterinary medicine, Assiut university. The right hock joint was enlarged (Fig. 1), 20 days ago with slight degree of lameness.

Clinical examination:

On admission, physical examination of the hock joint revealed anteromedial swelling due to synovial effusion. Light degree of lameness was observed especially at trotting. Spavin test resulted in positive reaction. The aspirated fluid had the normal synovial appearance.

An osteochondral fragment of the cranial aspect of the sagittal ridge of the tibial cochlea of the right pelvic limb was detected via survey radiography (Fig. 2).

Diagnosis:

The condition has been diagnosed as osteochondritis dissecans of the talocrural joint. Surgical removal of the intra-articular fragments was recommended for treatment.

Surgical procedures:

The mare was routinely given general anaesthesia and positioned in lateral recumbency with left side down, exposing the craniolateral aspect of the upper (right) hock joint for craniolateral approach arthrotomy. The limb was prepared for aseptic surgery in routine manner.

An about 8-cm longitudinal skin incision was made over the craniolateral aspect of the joint, lateral to the tendon of the long digital extensor muscle. The incision was extended from the level of the lateral malleolus of the tibia proximally to the level of the annular ligament and the lateral tendon of the fibularis tertius muscle distally.

The subcutaneous fascia and joint capsule were incised. Care had to be taken to avoid injury to the cranial tibial artery and vein and the deep fibular nerve. The joint capsule margins were retracted laterally and medially as the hock joint was flexed to expose the joint cavity. The osteochondral fragment became visible and had been pried off the parent bone and the underlying bed had been curetted.

The joint capsule, subcutaneous tissues and skin were closed separately, using an interrupted suture pattern. Following operation the joint had been radiographed to ensure that the whole fragments were removed.

The operated limb was bandaged above the hock joint till the hoof. The horse was injected twice daily with i.m streptopenicide and i.v gentamycine sulfate for five days. The bandage was kept in place for 3 weeks. Skin sutures were removed 10 days following the operation. The horse received light exercises after removing the bandage.

RESULTS

A follow-up radiographs were taken periodically after operation. About 6 months after surgery the joint appeared normal and all clinical signs disappeared

DISCUSSION

Osteochondrosis is disorder affecting growth cartilage differentiation and ossification of the joint surface and physes. The condition may progress along one of two morphologic pathways, with formation of cartilage flaps characteristic of osteochondritis dissecans or infolding of defective cartilage and formation of periarticular subchondral bone cyst (WATKINS, 1992).

The present case has been diagnosed as OCD due to the presence of osteochondral fragments which originated from the thickened cartilage flap.

Osteochondrosis appears to be more prevalent today than ever before. it may be the most significant skeletal disorder included in the equine developmental orthopedic disease complex (WATKINS, 1992). Therefore the present case was essentially regarded to be recorded.

The clinical signs of synovial effusion and lameness is due to synovitis which resulted from the release of tissue debris, when OCD occurs. OCD of the talocrural joint is frequently not accompanied by lameness because it is a high motion joint. The affected animals are presented mostly with synovial effusion (Bog spavin) without lameness (STASHAK, 1987 and watkins, 1992).

The lesion of the present case was typically in the predilection seat of the OCD of the talocrural joint where the cranial aspect of the sagittal ridge of the tibial cochlea was affected.

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LEGENDS

Fig. 1: 3-year-old mixed breed mare with enlarged right hock joint.

Fig. 2: Survey radiograph showing separated osteochondral fragment of the cranial aspect of the sagittal ridge of the tibial conchlea (arrow).

OSTEOCHONDRITIS DISSECANS, TALOCRURAL JOINT & MARE

